

WHAT IS CLAIMED IS:

1. A microwave oven comprising:
a heating chamber holding food therein;
a magnetron generating microwaves;
a radiation antenna provided in said heating chamber for radiating
5 the microwaves generated by said magnetron into said heating chamber;
and

an antenna moving unit moving said radiation antenna, wherein
said radiation antenna includes a first plane facing an inner wall of
said heating chamber and a second plane facing said inner wall and located
10 closer to said inner wall relative to said first plane,
said first plane has an opening formed therein, and
said antenna moving unit is capable of moving said radiation
antenna between a first position and a second position by changing the
distance between said radiation antenna and said inner wall, said radiation
15 antenna at said first position radiating the microwaves generated by said
magnetron from an edge of said opening and said radiation antenna at said
second position radiating the microwaves generated by said magnetron
from respective edges of said first plane and said second plane.

2. The microwave oven according to claim 1, wherein
said antenna moving unit rotates said radiation antenna.

3. The microwave oven according to claim 2, wherein
said antenna moving unit moves said radiation antenna between
said first position and said second position while rotating said radiation
antenna.

4. The microwave oven according to claim 1, wherein
said antenna moving unit moves said radiation antenna in a
predetermined manner before said magnetron starts generating
microwaves.

5. The microwave oven according to claim 1, wherein said antenna moving unit stops said radiation antenna at a predetermined position when said magnetron completes its operation.

6. The microwave oven according to claim 5, further comprising a switch turned on/off according to where said radiation antenna is positioned, said switch being turned off when said radiation antenna is at said predetermined position.

7. The microwave oven according to claim 1, wherein said antenna moving unit stops said radiation antenna at said first position or said second position only.

8. The microwave oven according to claim 1, further comprising a number storing unit storing the number of times said radiation antenna has been stopped at said first position and the number of times said radiation antenna has been stopped at said second position, wherein

5 when said microwave oven is powered, said antenna moving unit stops said radiation antenna at one of said first position and said second position, at which said radiation antenna has been stopped a greater number of times which is stored in said storing unit.

9. The microwave oven according to claim 1, further comprising a number storing unit storing the number of times said radiation antenna has been stopped at said first position and the number of times said radiation antenna has been stopped at said second position, wherein

5 when said magnetron completes its operation, said antenna moving unit stops said radiation antenna at one of said first position and said second position, at which said radiation antenna has been stopped a greater number of times which is stored in said storing unit.

10. The microwave oven according to claim 1, further comprising an antenna position sensing unit detecting that said radiation antenna is

at said first position and/or said second position, wherein

5 said antenna moving unit stops said radiation antenna from moving
when no sensing output is obtained from said antenna position sensing unit
even though said radiation antenna is moved for a predetermined time.

11. The microwave oven according to claim 10, further comprising
a magnetron control unit controlling operation of said magnetron, wherein
5 said magnetron control unit stops said magnetron from generating
microwaves when no sensing output is obtained from said antenna position
sensing unit even though said antenna moving unit moves said radiation
antenna for a predetermined time.

12. The microwave oven according to claim 10, further comprising
a notifying unit providing a notification, when said antenna moving unit
stops movement of said radiation antenna, that said antenna moving unit
stops said radiation antenna from moving for the reason that no sensing
5 output is obtained from said antenna position sensing unit.

13. The microwave oven according to claim 1, further comprising a
magnetron control unit controlling operation of said magnetron, wherein
5 said magnetron control unit allows said magnetron to generate
microwaves on the condition that said radiation antenna is stopped at said
first position or said second position.